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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,044	07/11/2003	Masaru Kobayashi	030673-162	3069
7590 03/05/2004				
BURNS, DOANE, SWECKER & MATHIS, L.L.P.		EXAMINER		
P.O. Box 1404		JIMENEZ, MARC QUEMUEL		
Alexandria, VA 22313-1404		ART UNIT PAPER NUMBER		
		3726		

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/617,044	<b>Applicant(s)</b> KOBAYASHI ET AL.	
	<b>Examiner</b> Marc Jimenez	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/117,993.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 8-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyosawa et al. (6,082,222) in view of Linzell (5,519,182).

Kiyosawa et al. teach a method of manufacturing a rigid internal gear of a wave gear device, in which the rigid internal gear comprises a main gear ring **14** and a tooth-forming ring **16** having internal teeth **18** formed on an inner circumferential surface thereof and, in which the tooth-forming ring **16** is disposed inside the main gear body **14** and integrally bonded thereto (col. 2, lines 35-61), forming the main gear ring **14** from a first material that has a low linear expansion coefficient (col. 2, lines 27-28), forming the tooth-forming ring from a second material that has a high linear coefficient (col. 2, lines 30-31), pressing (col. 2m lines 48-49) the tooth-forming ring **16** into an inside of the main gear ring **14**. It is noted that the joint between the main gear and tooth-forming ring was formed by attaching pins, welding, or brazing (col. 2, lines 50-61).

Therefore, Kiyosawa et al. teaches the invention cited with the exception of diffusion-combining the tooth-forming ring and the main gear ring.

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Linzell teaches that it is known diffusion-combine (col. 12, lines 10-34) rings **20,22** together. Furthermore, Linzell seeks to distinguish from the prior art by teaching that it was known to use other types of connection methods:

“..., while two pieces of metal can be glued, soldered, **brazed, welded**, bolted, riveted... and so on. It is even possible to make good joints that are held together simply by the friction between the two parts.” (col. 1, lines 13-16).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Kiyosawa et al. with diffusion-combining the tooth-forming ring and the main gear ring, in light of the teachings of Linzell, in order to provide a strong weld-like bond between the two bodies as suggested by Kiyosawa et al. at col. 12, line 34.

Regarding claims 9-11, Kiyosawa et al. teach the invention cited with the exception of using the claimed materials for the first and second materials.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331. It is noted that Kiyosawa et al. teach that the main gear ring should be made of a lightweight material such as aluminum alloy or the like and the tooth-formed member should be made of a high strength and wear resistance material such as ferrous or copper material. Applicant's specification discloses on page 10, lines 8-12 that “In the present embodiment, the tooth-forming ring 12 is formed of an abrasion-resistant and strong material, while the main gear ring 11 is formed of a lightweight material.”

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Therefore, the particular combinations used are clearly a matter of obvious design choice because the materials are chosen such that the main gear ring should be made of lightweight material and the tooth-formed member should be made of high strength and wear resistance material. Furthermore, it is noted that Linzell teaches that it is known to bond any type of material together (see col. 6, lines 10-24).

Regarding claim 12, Linzell teaches providing a taper between the joints (col. 17, lines 21-24) to facilitate lead-in insertion.

Regarding claim 13, Kiyosawa et al. teach that a gear cutting process for forming the internal teeth on the tooth-forming ring is performed after the tooth-forming ring has been joined to the main gear ring to form a single body (col. 2, lines 62-65).

3. **Claims 8-14** are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyosawa et al. in view of Linzell and either one of Carlson (4,663,813), Ferrary (3,239,699), and Belshaw (1,347,671).

It is noted that the claims do not preclude the use of splines, serrations, or baffle means 24 of Kiyosawa et al.

However if the claims are amended to preclude the use of splines, serrations, or baffle means, it is clearly known to provide a connection without baffles, splines, or serrations as demonstrated by either one of Carlson, Ferrary, or Belshaw between internal gearing and an outer ring. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to provide a connection without baffles, splines, or serrations in Kiyosawa et al., in light of the teachings of either one of Carlson, Ferrary, or Belshaw, in order

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to reduce the number of machining steps to create the baffles, splines, or serrations. The use of the claimed materials is deemed to be an obvious matter of design choice as described above.

### ***Contact Information***

4. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to [CustomerService3700@uspto.gov](mailto:CustomerService3700@uspto.gov).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

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should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Petitions/Special Programs	(703) 305-9285
Terminal Disclaimers	(703) 305-8408
PCT Help Desk	(703) 305-3257

If the information desired is not provided above, or a number has been changed, please call the general information help line below.

Information Help line	1-800-786-9199
Internet PTO-Home Page	<a href="http://www.uspto.gov/">http://www.uspto.gov/</a>



Marc Jimenez  
Patent Examiner  
AU 3726

MJ

March 4, 2004